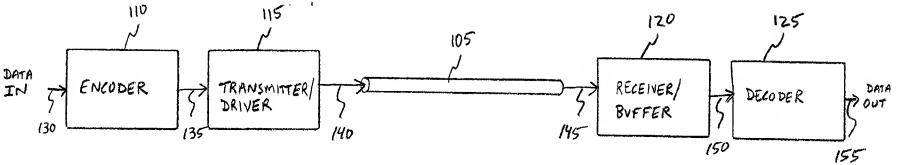
20h120 h0697001



100

FIG. 1

20h120 h0697001

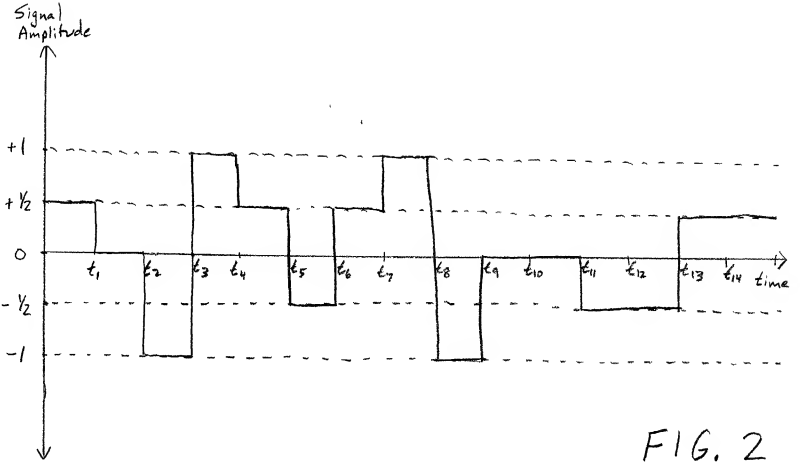


FIG. 2

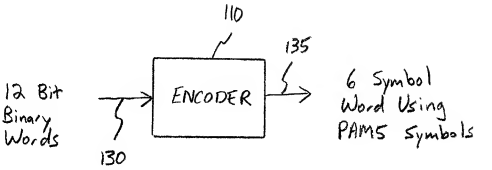

110
135
12 Bit
Binary
Words
ENCODER
6 Symbol
Word Using
PAM5 Symbols
130

FIG. 3

20120-0056007

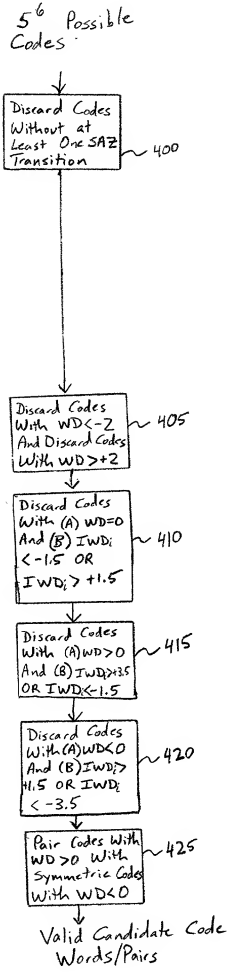


FIG. 4

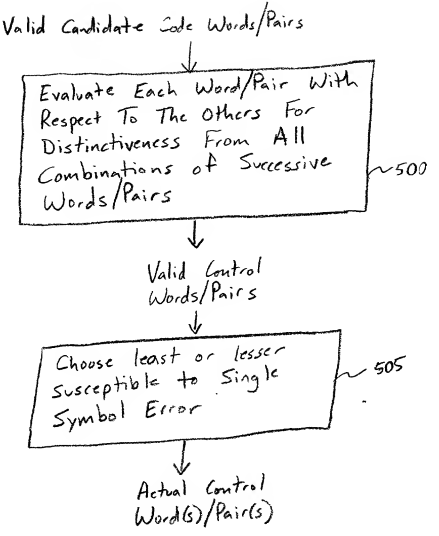

Valid Candidate Code Words/Pairs
Evaluate Each Word/Pair With Respect To The Others For Distinctiveness From All Combinations of Successive Words/Pairs
500
Valid Control Words/Pairs
Choose least or lesser Susceptible to Single Symbol Error
505
Actual Control Word(s)/Pair(s)

FIG. 5

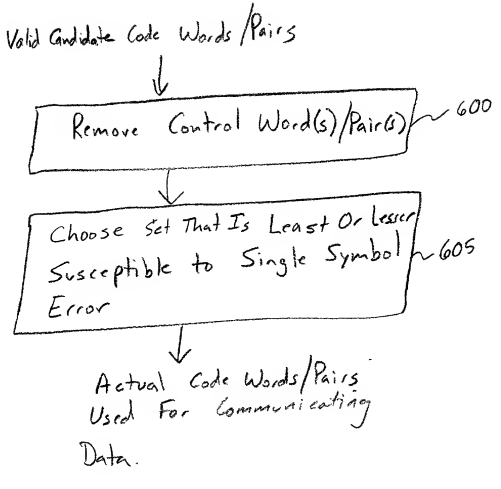

Valid Candidate Code Words/Pairs
Remove Control Word(s)/Pair(s)
600
Choose Set That Is Least Or Lesser Susceptible to Single Symbol Error
605
Actual Code Words/Pairs Used For Communicating Data.

FIG. 6

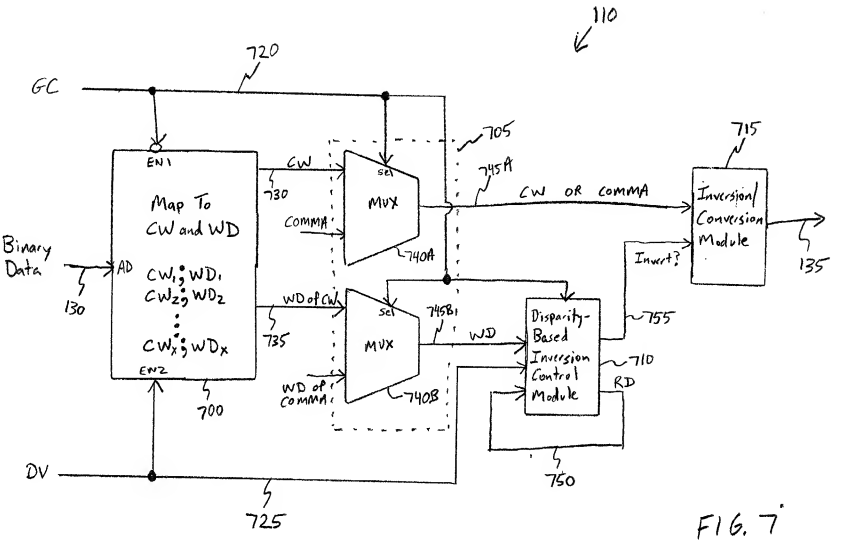

110
720
GC
705
715
EN1
Map To
CW and WD
CW
730
MUX
740A
745A
CW OR COMMA
Inversion/
Conversion
Module
135
Binary
Data
130
AD
CW1; WD1
CW2; WD2
CWx; WDx
EN2
700
COMMA
WD of CW
735
MUX
740B
745B
WD
Disparity-
Based
Inversion
Control
Module
710
RD
Invert?
755
WD of
COMMA
DV
725
750

FIG. 7

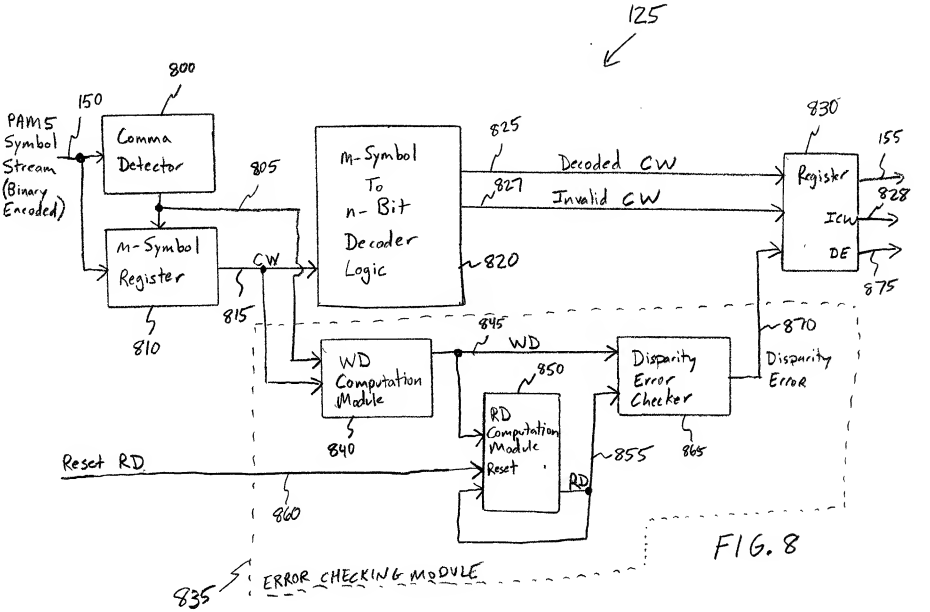

125
800
150
PAM5 Symbol Stream (Binary Encoded)
Comma Detector
805
m-Symbol Register
810
CW
815
m-Symbol To n-Bit Decoder Logic
820
825
Decoded CW
827
Invalid CW
830
Register
155
828
Icw
DE
875
WD Computation Module
840
845
WD
850
RD Computation Module
Reset
RD
855
Disparity Error Checker
865
870
Disparity Error
Reset RD
860
835
ERROR CHECKING MODULE

FIG. 8